

AMENDMENT TO THE CLAIMS:

1. (Currently Amended) An IR dryer, for use in drying a continuous paper web by means of IR radiation, comprising:

an array of IR emitters arranged, in use, in spaced relation to the paper web;

a lamp protection plate intermediate the IR emitters and the paper web[[,]] ;

characterized ~~characterised~~ in that at least one of the lamp protection plate and the array of IR emitters is curved whereby drying a paper web which moves in a curved path is facilitated.

2. (Original) An IR dryer as claimed in claim 1 wherein each of said IR emitters is a lamp comprising a heating element located within a curved quartz tube.

3. (Original) An IR dryer as claimed in claim 1 wherein each of said IR emitters is gas-powered.

4. (Currently Amended) An IR dryer as claimed in claim 1 ~~any of the preceding claims~~ wherein said lamp protection plate comprises an array of curved quartz tubes.

5. (Original) An IR dryer as claimed in claim 4 wherein said lamp protection plate is cooled, in use, by the passage of gas, ~~for example air~~, through said curved quartz tubes.

6. (Currently Amended) An IR dryer as claimed in claim 1 ~~any of the preceding claims~~ further comprising a curved reflector plate.

7. (Currently Amended) An IR dryer, for use in drying a continuous paper web by means of IR radiation, comprising:

an array of IR emitters arranged, in use, in spaced relation to the paper web;

a lamp protection plate intermediate the IR emitters and the paper web[[,]] ;

characterized ~~characterised~~ in that the lamp protection plate comprises a plurality of quartz tubes arranged in an array.

8. (Original) An IR dryer as claimed in claim 7 wherein the lamp protection plate is cooled in use, by the passage of gas, ~~for example air~~, through said quartz tubes.

9. (Currently Amended) An IR dryer as claimed in claim 7 ~~or claim 8~~ wherein said IR emitters are lamps, each comprising a quartz tube, substantially identical to those used in the lamp protection plate, in which is located an IR heating element.

10. (Currently Amended) An IR dryer as claimed in claim 7 ~~any of claims 7-9~~ wherein said quartz tubes are curved.

11. (Currently Amended) A method of bending an elongate quartz tube comprising the steps of:

supporting the tube in a substantially vertical orientation;
gripping the tube near its uppermost end;
heating the tube at region intermediate its lowermost end and the uppermost end; and
moving the gripped uppermost end of the tube so that the tube, softened in the vicinity of the heating region, is bent.

12. (Original) A method as claimed in claim 11 wherein the gripped uppermost end of the tube is moved in an arc.

13. (Currently Amended) A method as claimed in claim 11 ~~or claim 12~~ wherein the tube is counterbalanced.

14. (Currently Amended) A method as claimed in claim 11 ~~any of claims 11-13~~ wherein the lowermost end of the tube is constrained to move in a substantially vertical path.

15. (Currently Amended) Apparatus for bending an elongate quartz tube comprising:
support means for supporting the tube in a substantially vertical orientation;
gripping means for gripping the tube near its uppermost end;
heating means situated at a region intermediate the lowermost end and the uppermost end of the tube; and

driving means for moving the gripped uppermost end of the tube, in use, so that the tube, softened in the vicinity of the heating means, is bent.

16. (Original) Apparatus as claimed in claim 15 wherein the heating means substantially surrounds the tube, in use.

17. (Currently Amended) Apparatus as claimed in claim 15 ~~or claim 16~~ wherein the heating means comprises a plurality of gas burners.

18. (Currently Amended) Apparatus as claimed in claim 17 ~~when dependent on claim 16~~ wherein the plurality of gas burners comprises a ring of gas burners, in the center ~~centre~~ of which the tube is situated, in use.

19. (Currently Amended) Apparatus as claimed in claim 15 ~~any of claims 15-18~~ further comprising barrier means which has a curved surface against which the tube may abut, in use, so as to prevent lateral movement of the tube.

20. (Original) Apparatus as claimed in claim 19 wherein the barrier means comprises a wheel.

21. (Currently Amended) Apparatus as claimed in claim 20 wherein the wheel is removable ~~removeable~~ and replaceable with a wheel of different diameter.

22. (Currently Amended) Apparatus as claimed in claim 15 ~~any of claims 15-21~~ further comprising a counter-balance arrangement by means of which the lowermost end of the tube can be constrained in use, to follow a substantially vertical path.

23. (Currently Amended) Apparatus as claimed in claim 15 ~~any of claims 15-22~~ wherein said driving means comprises a pivotable arm, at one end of which is situated said gripping means, the arm being pivotable, in use, so that the gripping means generally describes an arc.

24. (Original) Apparatus as claimed in claim 23 wherein ~~[[the]]~~ a pivot point of said pivotable arm is, in use, substantially horizontally level with a desired region of bending of the tube.

25. (Currently Amended) Apparatus as claimed in claim 23 ~~or 24~~ wherein said pivotable arm is driven by a motor.

26. (Currently Amended) Apparatus as claimed in claim 15 ~~any of claims 15-25~~ wherein said gripping means is water-cooled.

27. Cancelled

28. Cancelled

29. An IR dryer for use in the papermaking industry including comprising:
an array of curved lamps, each of which lamps includes ~~comprises a~~ an IR heating element located within a curved quartz tube ~~as claimed in claim 28~~.

30. An IR dryer as claimed in claim 29 further including a curved reflector plate.

31. An IR dryer for use in the papermaking industry ~~including~~ comprising:
a curved lamp protection plate which includes ~~comprises~~ an array of curved quartz tubes ~~as~~
~~claimed in claim 27.~~